## New Distribution of Astragalus sikokianus Nakai (Leguminosae) in Korea

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Astragalus sikokianus Nakai is hitherto known as an endemic species of Japan. This plant was first recorded from Isl. Seongmo-do, Korea, however, it is extinct now. Recently two populations of this species have been found on the eastern coast of Korean Peninsula.

Key words: Astragalus sikokianus, disjunctive distribution, Korea, new record, ocean current.

Astragalus sikokianus Nakai is an endemic species recorded from Naruto City, Tokushima Pref., Shikoku, Japan (Fig. 1), but the plant is now not found at the natural habitat (Ohashi 1982, 2001). The species is distinguished from the others of the genus in having yellow flowers, leaflet number 23–31, calyx teeth 1/2–2/3 as long as calyx tube and bracts as long as the calyx.

In Korea the species was firstly found in an island of Yellow Sea; Isl. Seongmo-do, Samsan-myeon, Ganghwa-gun, Incheon, Korea (Fig. 1), but it is extinct from the locality due to construction of a bank. Recently we found other two populations of this species on the eastern coast of Korean Peninsula; Daedongbae-ri, Daebo-myeon, Pohang-Gyeongsangbuk-do and Geundeokmyeon, Samcheok-si, Gangwon-do (Fig. 1). Plants of these populations grow on grassy places of seashore. We could not find any morphological differences between Japanese and the Korean plants (Figs. 2–5).

The species shows a disjunctive distribution in Shikoku of Japan, an island of Yellow

Sea and eastern coast of Korea. The plant might be dispersed by an ocean current. Recently we reported a distribution of *Suaeda malacosperma* H.Hara from western coast of Korea (Shim et al. 2001). The species also grows at a seashore (salt marsh) and had been recorded as an endemic species of



Fig. 1. Distribution of Astragalus sikokianus
Nakai. A. Isl. Seongmo-do (extinct, Korea). B.
Geundeok-myeon (Korea). C. Pohang-si (Korea).
D. Naruto City (extinct, Japan).

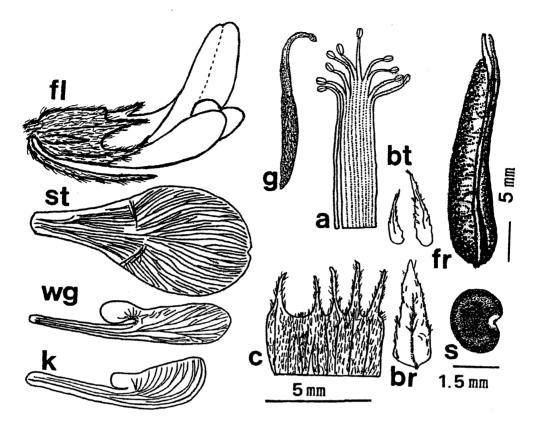
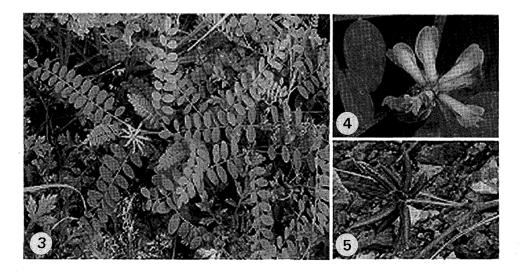


Fig. 2. Flower of Astragalus sikokianus Nakai (voucher specimen: Pohang-si, S. K. Kwon & S. Y. Kim 210111, IUI). a: androecium. br: bract. bt: bracteole. c: calyx opened (outer surface). fl: flower. fr: fruit. g: gynoecium. k: keel-petal. s: seed. st: standard. wg: wing. All scale are same except for fruit and seed.



Figs. 3-5. Astragalus sikokianus Nakai in Korea. Fig. 3. Habit. Fig. 4. Flowers. Fig. 5. Fruits.

Japan.

Astragalus sikokianus Nakai in Bull. Nat. Sci. Mus. Tokyo No.33, 15 (1953); Ohwi, Fl. Jap. 697 (1953), l. c. ed. Engl. 574 (1965); Kitam. & Murata, Col. Illust. Herb. 2: 113 (1961); H.Ohashi in Wild Herb. 2: 191 (1982); Ohwi & Kitag., New Fl. Jap. 918 (1983); H.Ohashi in K.Iwats. & al., Fl. Jap. IIb: 244 (2001).

Distribution. Japan: Shikoku (extinct in the wild) and Korea (New records).

Specimens examined. Korea. Gyeongsangbuk-do. Pohang-si, Nam-gu, Daebo-myeon, Daedongbaeri. 11 Oct. 2002. S. G. Kwon & S. Y. Kim 210111 (IUI, TUS), 210112 (IUI, TUS); Geundeok-myeon, Samcheok-si, Gangwon-do. 24 May 2002. E. S. Jeon s.n. (IUI).

金 昭映<sup>\*</sup>, 崔 秉熙<sup>\*</sup>, 全 義植<sup>\*</sup>: 韓国で新発見 のマメ科ナルトオウギ

ナルトオウギは日本の固有種で徳島県鳴門市で発見されたが、今日自生地では絶滅してしまった. しかし、韓国には生育することが明らかとなった. 1983年に仁川広域市江華郡三山面席毛島で最初に発見されたが、この集団は今日では絶滅した. 現在知られているのは東海岸の慶尚北道浦項市大甫面大冬背里および江原道三陟市近徳面である We are grateful to Emeritus Professor Hiroyoshi Ohashi of Tohoku University for examining the specimens and reading the manuscript.

## References

- Ohashi H. 1982. Leguminosae. *In*: Satake Y., Ohwi J., Kitamura S., Watari S. and Tominari T. (eds.), Wild Flowers of Japan, Herbaceous Plants (including Dwarf Subshrubs) 2: 186–212. Heibonsha, Tokyo (in Japanese).
- —— 2001. Leguminosae. *In*: Iwatsuki K., Ohba H. and Boufford D.E. (eds.), Flora of Japan **IIb**: 213–279. Kodansha Ltd., Tokyo.
- Shim H.B., Chung J.Y. and Choi B.H. 2001. One unrecorded species from Korea: *Suaeda malacosperma* Hara. Kor. J. Pl. Tax. **31**: 383–387 (in Korean).

(Fig. 1). このような分布パターンからみて,ナルトオウギは海流によって散布されるのであろうと推定される. なお,韓国西海岸では日本固有種とされていたアカザ科のヒロハマツナも最近発見された.

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